

SIGNALLING AND TELECOMMUNICATION

1.1 Signalling

Route	Section	No. of Stations	Signalling	RRI	Panel	Electro-Mech	SSI	Mechanical
A	AGC-PWL	16	MACLS	1	5	-	10	-
	AGC-DHO	4	MACLS	-	4	-	-	-
B	AF-BKI	16	MACLS	-	14	-	2	-
D Spl	JAB-TDL	04	MACLS	-	-	-	4	-
	MTJ-AH	03	MACLS	-	3	-	-	-
D	IDH-BXN	07	MACLS	-	7	-	-	-
E	MTJ-AWR	11	MACLS	-	-	-	11	0
	JAB-RKM	01	MACLS	-	-	-	1	-
	BHA-UDI	03	MACLS	-	-	-	3	-
	Total	65		1	33	-	31	0

1.2 LC Gates

Route	Section	No. of Gates		
		Interlocked	Non Interlocked with Telephone	Total Gates with Telephone
A	AGC – PWL	52	00	52
	AGC-DHO	12	12	24
B	AF – BKI	24	48	72
D Spl	JAB – TDL	01	01	2
	MTJ – AH	04	02	6
D	IDH – BXN	15	30	45
E	MTJ – AWR	11	23	34
	AGC – IDH	01	00	1
	BHA-UDI	02	00	2
	MTJ-BDB	00	00	0
	Total	122	116	238

2.1 TELECOMMUNICATION

2.1.1 Control Circuits

S. No.	Section	Media
1	DHO-AGC	OFC + 6-Q Cable
2	AGC-FAR	OFC + RE Cable (0+12+2)
3	IDH-BXN	OFC
4	BHA-UDMR	6-Q Cable
5	MTJ-FAR	OFC, 0+12+2 CABLE & 6-Q cable
6	MTJ-PWL	OFC, 0+12+2 Cable
7	MTJ-AWR	OFC, 6-Q Cable
8	MTJ-AH	OFC, 6-Q Cable

2.1.2 TELEPHONE EXCHANGES

Sr. No.	Station	Year of Installation	Type of Exchange	Capacity	Total No. in use
1.	AGC	2016	CORAL 4000	1500	900
2.	AGC	2006	Ericsson BP 250	256	112
3.	DHO	2004	C-DOT/ITI	256	56
4.	AF	2006	SIGMA INDX 2000(BPL)	300	226
5.	AH	2018	CORAL	128	80
6.	BAD	2017	CLIXXO	512	60
7.	MTJ	2006	D-Exchange coral, NE 1500	1000	320
8.	KSV	2018	CORAL DX 2000	128	41
9.	IDH	2018	CORAL	128	64
10.	NDLS	2010	MDF	6+24	11
11.	BINR	2018	CORAL DX2000	128	2

3.0 PASSENGER AMENITIES

Sr. No.	Description of Amenities	Section	Total No. of stations	Name of Station
1	Computerized PA System	DHO-PWL	6	DHO, AGC, RKM,MTJ,KSV,BTSR
		IDH-BXN	-	-
		TDL-BKI	3	AF,IDH,AH
2	Coach guidance system	DHO-PWL	3	DHO, AGC, MTJ
		IDH-BXN	-	-
3	Conventional PA System	DHO-PWL	5	RNKA,CHJ,HDL,SHLK,RDE
		IDH-BXN	2	FTS, RBS
		MTJ-AH	2	BSA,PRK
		MTJ-AWR	2	DEEG,GDO
		TDL-BKI	3	NBI, KL, MURD
4	CCTV	DHO-PWL	2	AGC,MTJ
		IDH-BXN	-	-
5	Digital clocks/Clocks	DHO-PWL	25	DHO, MIA,JJ,BHA,AGC,RKM, BFP,KXM,RNKA,FAR, BAD,MTJ,BTSR,VRBD,BDB,AJH, CHJ,KSV,HDL,SHLK, RDE,BARI,SRMT,TPO, MHF,
		IDH-BXN	7	PTLI,MIQ,KLB,FTS,RBS, BIQ,BR
		MTJ-AWR	13	MORA,RAKD,GDO,BEHJ,DEEG,BEDM,BINR, GVH,JBS,RAH,OTD
		MTJ-AH		BSA,PRK
		TDL-BKI	19	ETUE, KBP, CHLR, JAB, AGA, AF, IDH, BCP, RAI, AH, CIK, IK, HK, PPEA, NBI, KL, GOS, KPO, MURD, BW
6	LCD Train information display boards	DHO-PWL	2	AGC,MTJ
		IDH-BXN	-	-
		TDL-BKI	1	AF
7	NTES	DHO-PWL	3	AGC,MTJ,KSV
		IDH-BXN	-	-
		TDL-BKI	1	AF
8	Train Display board	DHO-PWL	5	DHO, AGC,RKM,MTJ,KSV
		TDL-BKI	3	AF, IDH,AH
9	PRS	DHO-PWL	8	DHO, AGC, RKM, MTJ,BTSR,BDB,KSV,HDL
		IDH-BXN	3	KLB, FTS, RBS
		TDL-BKI	6	AF,IDH,AH,MURD,NBI,KL
10	UTS	DHO-PWL	21	DHO, MIA,JJ,BHA,AGC,RKM, BFP,KXM,RNKA,FAR, BAD,MTJ,BTSR,VRBD,BDB,AJH, CHJ,KSV,HDL,SHLK,RDE
		MTJ-AWR	13	MORA,RAKD,GDO,BEHJ,DEEG,BEDM,BINR, GBH,JBS,RAH,OTD,
		MTJ-AH		BSA,PRK
		IDH-BXN	7	PTLI,MIQ,KLB,FTS,RBS, BIQ,BR
11	WiFi System	DHO-PWL	3	AGC, MTJ , RKM
		IDH-BXN	-	-

4.0 STATUS OF IMPORTANT WORKS EXECUTED BY VARIOUS UNITS OVER AGRA DIVISION

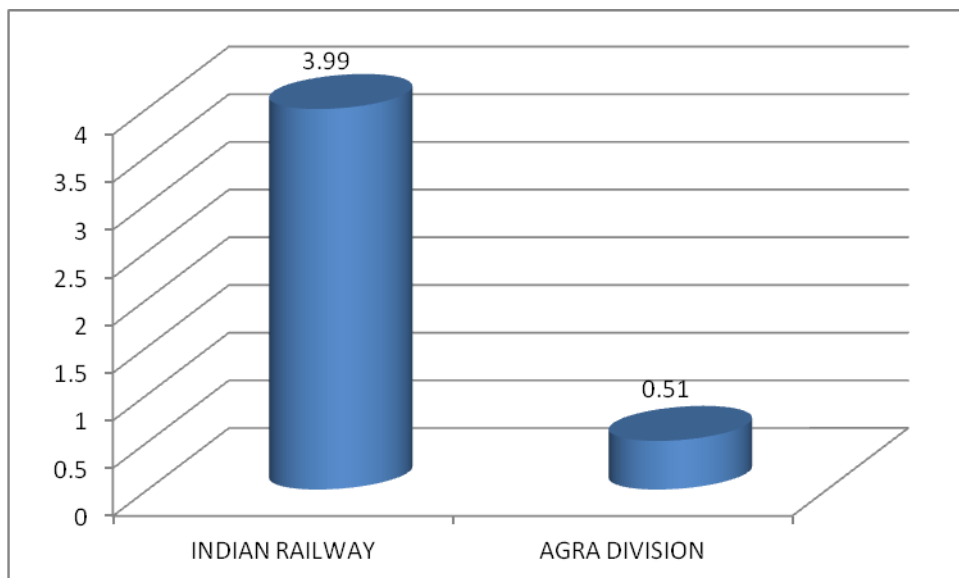
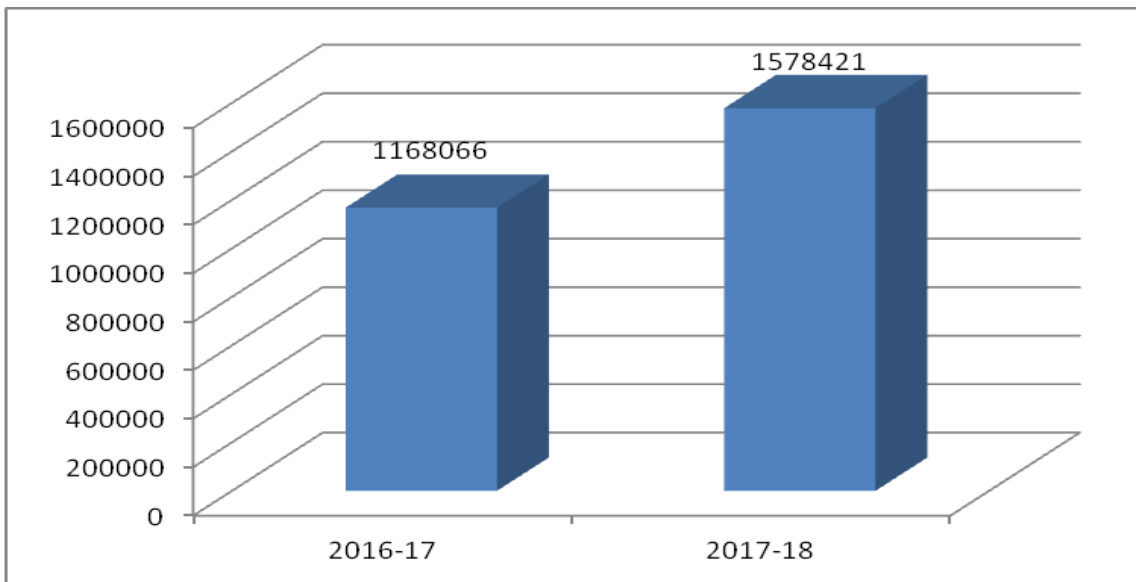
S. No.	Description of work	Executing agencies	Year of Sanction	Status
1	Up gradation of Sig. gears in MTJ-AWR section by SSI	Construction	2007-08	work in progress.
2	JAB Yard Re-Modelling	Construction	2011-12	Work is being executed by Construction unit.
3	4th line in PWL-BTSR section.	Construction	2015-16	4 th line has been commissioned in between SHLK-RDE-PWL
4	MTJ Yard Re-Modelling	Construction	2011-12	Work is being executed by Construction unit.
5	MTJ-DHO 3 rd line	RVNL	2017-18	Work is being executed by RVNL unit.
6	Replacement of overaged signalling gears and cable of MTJ-PWL Automatic section.	Division	2015-16	Financial bid is opened on 06.04.2018.
7	Replacement of old wornout signalling gears by EI at BFP, RNKA, KXM,FAR,BAD	Division	2017-18	Tender called for KXM and FAR station by division. Rest to be done by RVNL.

5.0 CADRE POSITION

Sr.No	Department	Sanctioned	MOR	Vacancy	%age	
1	Sig	Supervisor	58	45	13	22.41%
		Technicien	277	181	96	34.65%
2	Tele	Supervisor	42	28	14	33.33%
		Technicien	108	91	17	15.74%
3	Other	488	397	55	11.27%	

5.1 Manpower Productivity Ratio

DESU (Division Equated signal Units)



5.2 Proposals for Creation of Posts

Sr. No.	Description of Proposal	Ref vide which proposal sent to HQ	No. of Posts
(A)	Against newly created assets		
1.	For 3 rd line in PWL – B TSR section	Agra/N/103/S&T/Creation of posts dated 18.06.2008	123
2.	MTJ-PWL 4 th line	P/Agra/EG/-17 dt. 22.12.2017	151
3.	For SSI in Agra Cantt.	Agra/S&T/P/Srijan/23/15 dt. 02.02.2015	23
	Total (A)		297
(B)	As per New yardstick		
1.	For maintenance of signalling gears in MTJ-AWR section as per Rly board 's New Yard Stick dt. 16/18.08.2010	P/Agra/EG/S&T/Srijan/13 dt. 17.10.2013	138
2.	For maintenance of signalling gears as per Rly board 's New Yard Stick dt. 16/18.08.2010	P/Agra/EG/Srijan/S&T -729/12 dt. 21.03.2012	729
3.	For maintenance of Telecom gears	Agra/N/103/S&T/Creation of posts dated 19.12.2007	90
	Total (B)		957

6.0 Important achievements during 2018-19 (Apr-18 to Feb-19)

6.1 Major Achievements

1. Total nos. of signal Failures have been reduced by 15.11%, 20.86%, 8.80%, 12.58% in month of April, May, November, December respectively in comparison to same period last year.
2. **Control Office Application (COA) system** has been installed at MTJ RRI, MTJ branch line and Dholpur.
3. **Management Information System (MIS)** has been commissioned at 09 stations in MTJ-PWL Section for monitoring of signalling gears.
4. **EI (Westrace Make) in Hot standby configuration with dual VDU** has been commissioned at Radhakund station on 28.04.2018.
5. **Two 98 inches DIGITAL RAIL MEUSUM** displays has been provided as a part of establishing digital meusum at MTJ.

6. **Electronic Interlocking in distributed hot standby architecture has been commissioned at SHLK station SSI** on 13.01.2019.
7. **20 numbers UFSBI Block Panel Instruments** have been commissioned between NBI-PPEA, PPEA-HK, DEEG-BEDM, BEDM-BINR, BINR-GVH, GVH-JBS, JBS-RAH, RAH-OTD, RDE-SHLK & OTD-AWR Sections.
8. **64 no. CCTV cameras (Signal location)** has been provided at LC-77, 19, 38, 10 & at HK, AGC station and in DHO-AGC, AGC-MTJ section, S&T depo MTJ, circulating area in MTJ station & also in DRM Office campus for monitoring Biometric locations.
9. **20 numbers in-house alteration has been done departmentally in EI logic** at DEEG, BEDM, BINR, GVH, JBS, RAH, OTD stations, thus amounting to saving of 20 numbers X 7 lacs per alteration = 1.4 crores of railway revenue.
10. **Yard modification** work has been done by DFCCIL/IRPU at KBP station during NI work on 06.10.18.
11. **19 numbers Earth Leakage Detector (ELD) for earth fault detection** have been provided at BW, KPO, GOS, KL, HK, IK, CIK, MTJ, BTRS, VRBD, AJH, CHJ, KSV, HDL, SHLK, GC-2/MTJ stations and RH-13, 16.
12. **11 numbers Sliding Boom** has been commissioned at LC- 9, 29, 4AB, 31, 508, 54, 25, 26, 20, 512, 510.
13. **Coach Guidance & Train Indicator Board** has been commissioned at AF (PF no. 1 to 4) on 16.01.2019.
14. **Electronic telephone exchange** have been commissioned at AH & IDH Station on date 04.04.2018.
15. **MTRC functioning** has been restored with voice call recording with an average 700 number of calls on daily basis. 310 new users have been created and put in use.

6.2 Signal Reliability Improvement work

1. **13 nos. 'A' Class Earth protection** has been provided at BSA, PRK station and in MTJ-AWR & MTJ-AH section.
2. **05 pair Axle counter of G.G.Trionics** make has been commissioned in BEDM-BINR, GVH-JBS, JBS-RAH, RAH-OTD, OTD-AWR Section in connection with dual detection purpose.
3. **02 numbers HASSDAC** has been commissioned between RAI-AH Section.
4. **03 no. New IPS (Statcon make)** have been provided at AGC, SHLK A, B cabin.
5. **Fuse Alarm system with Standby fuses** in relay room has been provided at ETUE, KBP & CHLR stations.
6. 1150 nos **Exothermic Welding** has been provided at RKM, BFP, RNKA, KXM, FAR stations.
7. LC-498, 499 has been commissioned with **Electrically Operated Lifting Barrier (EOLB)** in lieu of Mechanical gates.
8. **02 no. Datalogger at SHLK, RAKD station and 03 no. RTU (Mini Datalogger)** has been commissioned at SHLK, BLJC station.
9. **40 no. Maintenance free Earth** has been provided in MTJ-AWR section & at SHLK A,B cabin.
10. **TSR system** has been provided at MTJ, BAD, BTRS, VRBD, AJH, CHJ, KSV, HDL, SHLK, RDE & JAB Stations.
11. **Multi Lamp Route Indicator (MLRI)** has been provided on S-4, S-99, S-95 at AGC.

12. **06 nos. FIRE ALARM system** have been provided at RDE, SHLK stations.
13. **04 pair Auto media change over for media redundancy between quad and OFC** has been provided between MTJ-BSA, JBS-RAH, RAH-OTD section.

6.3 Telecom Reliability Improvement work

1. **14 nos. FCT phone with BSNL sim** has been provided at RNKA, KXM, FAR, MORA, GDO, BSA, PRK, B TSR, VRBD, AJH, CHJ, BAD, MTJ GC-I stations & in KLB/DySS office.
2. **OFC equipment** such as STM, MUX, 48V VRLA battery set has been installed at 12 locations from BAD to PWL thus improving control communication.
3. **OFC channel** has been provided for UFSBI installation in BEDM-BINR, BINR-GVH, GVH-JBS, JBS-RAH, RAH-OTD & RDE-SHLK section.
4. **10.103.0.0/16 new pool** has been allotted to Agra division for Railnet.
5. **Internet Connection** has been provided at Crime Intelligence Office at IDH station.
6. **CCTV coverage is provided at AGC Railway hospital. Wi-Fi** has been provided at IDH and AGC Railway hospital.
7. **TPC phone** has been provided at Dy SS MTJ (B/L), BSA, PRK BCP, RAI, AH, CIK, IK & BTE stations.
8. **True-color 5 line display board** has been provided on main entry at AGC Station.
9. **New STM-1 and Mux** has been installed at AWR Branch Cabin departmentally.
10. **Hotline telephone** has been started on OFC between RKM to BFP.
11. **27 nos. 4 digit GPS platform clock** has been provided at KSV, HAB, AF, IDH stations.
12. **02 nos LCD** has been installed for Train information at MTJ enquiry office.
13. **Datalogger channel** has been provided at BLJC AWR.
14. New control phone been provided at RRI and Dy SS/MTJ.

7.0 Assistance Required

Due to increase in number of signalling gears as a result of completion works such as doubling in JAB-TDL, Up gradation work in MTJ-AWR section, 3rd line work in B TSR-PWL, Auto signalling in AGC-MTJ, EI at AGC and interlocking of LC gates and ongoing works like 4th line in MTJ-PWL, 3rd line in MTJ-DHO and EI at MTJ, it is becoming difficult to carry out statutory schedule of maintenance and inspections with the existing strength, hence sanction is required for creation of posts to meet the requirement as per norms.

